UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,532	12/14/2001	James Y. Hurt	PA010411	9150

23696   7590   06/17/2004

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER
BAKER, STEPHEN M

ART UNIT	PAPER NUMBER
2133	6

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/020,532	HURT ET AL.
	Examiner	Art Unit
	Stephen M. Baker	2133

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 March 2004</u>.

2a)☒ This action is **FINAL**.　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 19-27* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8-11* is/are allowed.

6)☒ Claim(s) *1-7,12-16 and 19-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

Paragraph [0014] is apparently incorrect, as it does not correspond to Figs. 4-6

or to Fig. 14.

Paragraph [0155] is unclear. The sentence "Prior to the first values stored the

memory storage 1204 is initialized ..." is elliptical and non-grammatical. The source

component for state values S0[0]:S0[3], S1[0]:S1[3], S2[0]:S2[3] is not described or

shown in Fig. 14.

In paragraph [0100], "for used with" apparently should be "for use with".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2.   Claims 1-7, 12-16, 19-22, 26 and 27 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Regarding claim 1: "if the first counter value is not a valid address" (language

added by amendment) has apparently been added in order to be misdescriptive

because, *e.g.* with reference to Fig. 12, selection unit 1306 is not directly responsive to

input "FROM COUNTER"; "if the second counter value is not a valid address" (language

added by amendment) has apparently been added in order to be similarly

misdescriptive.

Regarding claim 6: "if the first counter is not a valid address" (language added

by amendment) has apparently been added in order to be misdescriptive; "if the second

counter value is not a valid address" (language added by amendment) has apparently

been added in order to be similarly misdescriptive.

Regarding claim 12: "paralle" (language added by amendment) has apparently

been added in order to misspell "parallel".

Regarding claim 16: "generating a second set of state values ..." (language

added by amendment) has apparently been added before the step of "generating a first

set of encoded output values ..." in order to be out of correct step sequence; "storing

the second set of state values in memory storage" (language added by amendment)

has apparently been added before the step of "generating a first set of encoded output

values ..." in order to be out of correct step sequence; inclusion of "the second set of

state values" in the step of "generating a first set of encoded output values ..." has

apparently been added to make the claim further misdescriptive.

Regarding claim 20: the claim remains unamended apparently in order to

disagree with the examiner's previously-made correct observation that the claim is

misdescriptive. The three recited operations of "calculating" apparently take place in

different cycles of the "system clock", and the "generating" step apparently has no basis

in the disclosure. Reference is hereby made to the examiner's previously-provided

suggestions for correcting the claim.

Regarding claim 22: the claim remains unamended apparently in order to reflexively disagree with the examiner's previously-made correct observation that the claim is misdescriptive. The three recited operations of "calculating" apparently take place in different cycles of the "system clock" and the "generating" step apparently has no basis in the disclosure. Reference is hereby made to the examiner's previously-provided suggestions for correcting the claim.

Regarding claim 26: the claim remains unamended apparently in order to reflexively disagree with the examiner's previously-made correct observation that the claim is misdescriptive. The three recited operations of "calculating" apparently take place in different cycles of the "system clock", so there are no corresponding three separate "means for calculating", and the "generating" operation apparently has no basis in the disclosure. Reference is hereby made to the examiner's previously-provided suggestions for correcting the claim.

Regarding claim 27: the claim remains unamended apparently in order to reflexively disagree with the examiner's previously-made correct observation that the claim is misdescriptive. The three recited operations of "calculating" apparently take place in different cycles of the "system clock", so there are no corresponding three separate "means for calculating", and the "generating" operation apparently has no basis in the disclosure. Reference is hereby made to the examiner's previously-provided suggestions for correcting the claim.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-7 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S.

Patent No. 6,323,788 to Kim *et al* (hereafter Kim).

A description of a correspondence between elements in the arrangement

disclosed by Kim and the arrangements recited in claims 1-7 requires comprehensible

versions of claims 1-7.

5.   Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent Application No. 2002/0035709 to Chen *et al* (hereafter Chen).

A description of a correspondence between elements in the arrangement

disclosed by Chen and the arrangements recited in claims 1-7 requires comprehensible

versions of claims 1-7.

6.   Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,549,998 to Pekarich *et al* (hereafter Pekarich).

A description of a correspondence between elements in the arrangement disclosed by Pekarich and the arrangements recited in claims 1-7 requires comprehensible versions of claims 1-7.

7.   Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. 2003/0105913 to Lee (hereafter Lee).

A description of a correspondence between elements in the arrangement disclosed by Lee and the arrangements recited in claims 1-7 requires comprehensible versions of claims 1-7.

8.   Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,488,142 to Franaszek (hereafter Franaszek).

Franaszek shows a runlength-limited code encoder (Figure 2) including a means (Figure 4) for calculating a first set of state values, and a means (Figures 3.1, 3.2) for generating a first set of encoded output values. Reference is hereby made to the observations made elsewhere in this communication regarding the clarity of the claims.

9.   Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,922,507 to Simon *et al* (hereafter Simon).

Simon shows a convolutional trellis code encoder (Figure 13) including a state transition lookup table (113) means for calculating a first set of state values, and an encoder output lookup table (123) means for generating a first set of encoded output values. Reference is hereby made to the observations made elsewhere in this communication regarding the clarity of the claims.

10.   Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent

No. 5,931,965 to Alamouti (hereafter Alamouti).

Alamouti shows a convolutional trellis code encoder (Figure 21) including a state transition lookup table (1500) means for calculating a first set of state values, and an encoder output lookup table (1520) means for generating a first set of encoded output values. Reference is hereby made to the observations made elsewhere in this communication regarding the clarity of the claims.

11.   Claims 16, 19-23, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,392,037 to Kato (hereafter Kato).

Kato shows an image compression code encoder (Figure 1(a)) including a predictor means (102) for calculating a first set of state values, a differencer means (103) for generating a first set of encoded values, and a prediction error remainder generator means (104, 105, 106) for generating a second set of encoded values. Reference is hereby made to the observations made elsewhere in this communication regarding the clarity of the claims.

12.   Claims 16, 19-23, 26 and 27 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent No. 6,028,541 to Levine (hereafter Levine).

Levine shows an audio compression code encoder (Figure 1) including a predictor means (102) for calculating a first set of state values, a differencer means (112) for generating a first set of encoded values, and a sample residual generator means (106, 108, 110) for generating a second set of encoded values. Reference is hereby made to the observations made elsewhere in this communication regarding the clarity of the claims.

Claim Rejections - 35 USC § 103

13.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14.   Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,931,965 to Alamouti (hereafter Alamouti).

Using the generator disclosed by Alamouti to generating a convolutional code having the generator polynomials recited in claims 24 and 25 could not have been considered to involve an inventive step, because the generator polynomials recited in claims 24 and 25 were well known.

Claim Objections

15.   Claim 5 is objected to because of the following informalities: "the set of counter values are stored in a memory storage device" apparently refers to the operation of lookup table 1404 and 1454 (Fig. 15) described in paragraph [0172]. As the lookup table 1404 and 1454 are apparently addressed by counter values, "the set of counter values are stored in a memory storage device" apparently should read as "the set of counter values are used to address a memory storage device". Appropriate correction is required.

Allowable Subject Matter

16.   Claims 8-11 are allowed.

17.   Claims 12-15 would be allowable if claim 12 were to be rewritten to overcome the

rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Response to Arguments

18.   Applicant's arguments filed 29 March 2004 have been fully considered but they

are not persuasive.

Regarding the rejections based on the Kato and Levine references, applicant's

arguments rely on unclaimed and misclaimed limitations. The prediction units disclosed

by Kato and Levine are of course each a "state generator", which applicant apparently

does not dispute. The prediction units disclosed by Kato and Levine of course each

perform a "lookahead" state generation, regardless of whether the predictions contain,

or do not contain, some residual prediction errors.

Conclusion

19.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

20.   Applicant's amendment necessitated the new grounds of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

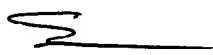MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (703) 305-9681. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen M. Baker
Primary Examiner
Art Unit 2133

smb